REMARKS

The application included claims 1-4, 6-13, and 18-30 prior to entering this amendment.

No claims are amended herein. No new matter is added.

The application remains with claims 1-4, 6-13, and 18-30 after entering this amendment.

Claim Rejections - 35 U.S.C. § 103

The Examiner rejected claims 1-4, 6-13, and 18-30 under 35 U.S.C. § 103(a) over Hajjahmad *et al.* (U.S. Patent 5,748,770) in view of Accad (U.S. Patent 5,553,200).

The rejection is traversed. The reference to Hajjahmad has been distinguished in the past four Responses filed by Applicant. The Accad reference was first distinguished in the Response dated December 17, 2007 and has now reappeared in the present Office Action, in which the Examiner has determined to combine the Accad reference with the Hajjahmad reference in this, the sixth Office Action since Applicant last filed a Request for Continued Examination back on March 5, 2009. The rejection of claims 1-4, 6-13, and 18-30 is traversed for the following reasons:

No Prima Facie Case of Obviousness

The Examiner failed to meet the legal burden of establishing a prima facie case of obviousness under MPEP 2142 at least for the reason that (1) the Examiner has not provided a proper suggestion or motivation to combine the references, (2) there is no reasonable expectation of success, and (3) the combination of references does not teach or suggest all the claim elements.

1. No motivation to combine

By way of providing motivation to combine Accad with Hajjahmad, the Examiner stated that "It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Hajjahmad by the teaching of Accad to have improved the reconstruction methods to incorporate into any bit-rate reduction techniques that uses dither arrays" (page 18 of the Final Office Action). Applicant respectfully disagrees.

Hajjahmad is directed to image color recovery while "transforming data from the spatial domain to the frequency domain" (col. 2, lines 18-37). According to Hajjahmad, "Spatial image

data points may be transformed to the frequency domain using transformations such as Fourier transforms or discrete cosine transforms... (and that) discrete cosine transforms and inverse discrete cosine transforms (may be used) for image compression" (col. 2, lines 7-11).

Accad, on the other hand, is directed to a method for providing bit-rate reduction and reconstruction of image data in which dither arrays are used to reduce the number of bits of the image data, and threshold arrays are used to perform de-dithering correction of the reconstructed image (column 15 lines 18-35). Accad describes that as "the contents of the frame buffer are scanned one line at a time by a raster reader... a lookup table is used to de-dither, dequantize and inversely transform the image information to produce N' bits per pixel per component of reconstructed image data" (col. 8, lines 13-19).

According to Accad, "One way of assuring both fast bit-rate reduction and fast reconstruction is to restrict the reduction techniques to those performed on a single pixel basis... excludes techniques that involve spatial processing" (col. 3, lines 60-64). Furthermore, according to Accad, "it is also desirable to perform bit-rate reduction on a single pixel basis, discarding any spatial compression" (col. 6, lines 47-49).

The teachings of Accad, related to bit-rate reduction and reconstruction, fail to provide any insight or guidance as to improving the transformation process from a spatial domain to a frequency domain, as disclosed in Hajjahmad. Rather, as described above, Accad appears to expressly teach away from the proposed combination. Accordingly, Applicant respectfully submits that the Examiner has failed to identify a proper basis for why one of ordinary skill in the art would be motivated to combine Hajjahmad with Accad.

Applicant further notes that the Examiner's reference to Okada (also at page 18 of the Final Office Action) fails to provide any motivation to combine Hajjahmad and Accad since Okada is no longer being relied upon by the Examiner in the present Office Action.

2. No reasonable expectation of success

In rejecting claim 1, the Examiner cited Accad at column 8, lines 4-9, in arguing that "the transformed image data is then pixel-wise thresholded using a dither array so that the image data is reduced to a smaller number of bits per pixel per component" allegedly discloses *decreasing the full color level of the color element by reducing a number of bits of the full color level of the color element to form a reduced color level image*, as recited by claim 1 (page 4 of the Final

Office Action).

As discussed above, Accad discloses "techniques that reduce the amount of frame buffer memory required" for printers (col. 2, lines 1-46) and "Halftoning by dithering (which) involves performing point by point comparisons of each pixel in the input image with the corresponding pixel in an equally sized comparison array" (col. 3, lines 10-14), while Hajjahmad discloses an image color recovery process while "transforming data from the spatial domain to the frequency domain" (col. 2, lines 18-37).

Even assuming, arguendo, that the combination of Accad with Hajjahmad is appropriate, Applicant respectfully submits that the bit-rate reduction and halftoning techniques, as taught by Accad, is sufficiently dissimilar to Hajjahmad's transformation process to render the proposed combination overly vague and indeterminate. For example, the Examiner has provided no explanation as to how the dither array disclosed by Accad could be applied to transforming data from the spatial domain to the frequency domain, as in Hajjahmad. Applicant notes that Hajjahmad does not refer to either of a "dither array" or "threshold array" as disclosed by Accad. Rather, the Examiner appears to be arguing that the type of arrays disclosed by Accad and Hajjahmad are irrelevant in combining the various features of one or the other reference together.

Applicant respectfully submits that such a liberal interpretation of the references is inconsistent with the different techniques disclosed by Accad, which relies on performing bit-rate reduction using "a pixel by pixel basis by stepwise calculations or by using LUT's" (Abstract), versus those of Hajjahmad which relies on "forward and inverse discrete cosine transforms" of the image data points and DCT coefficients, respectively (col. 4, lines 44-60).

Whereas both Hajjahmad and Accad relate to the compression of data, in one form or another, neither of these references disclose *wherein the number of bits reduced from the full color level is dependent on an image noise associated with the scanned image*, as recited by claim 1. Whether the compression is being performed by cosine transforms, or by bit-rate reduction, presumably both Hajjahmad and Accad would prefer to maximize the amount of data compression (e.g., Accad, col. 1, lines 55-67) rather than making the compression dependent on an amount of image noise. Furthermore, neither reference provides any suggestion or teaching that the disclosed methods of compression and/or transformation provide any reduction of image noise in the first instance, let alone *wherein decreasing the full color level causes the image noise to be substantially removed from the scanned image*, as recited by claim 1. Accordingly,

Applicant respectfully submits that the proposed combination fails to provide any reasonable expectation of success with respect to the removal of image noise.

3. The claim elements are not taught by the proposed combination

In rejecting claim 1, the Examiner appears to acknowledge that Hajjahmad fails to disclose *decreasing the full color level of the color element by reducing a number of bits of the full color level of the color element to form a reduced color level image, wherein the number of bits reduced from the full color level is dependent on an image noise associated with the scanned image, and wherein decreasing the full color level causes the image noise to be substantially removed from the scanned image,* as recited by claim 1; and, instead the Examiner alleged Accad discloses these features (page 4 of the Final Office Action).

The Examiner noted that "since the bit-rate reduction on a single pixel basis, discarding any spatial compression (noise) and each pixel using a dither array so that the image data is reduced to smaller number of bits (e.g., 4 or 2 bits per pixel. Thus the number of bits reduced from the full color level corresponds to an image noise level associated with scanning the image)" (page 4 of the Final Office Action). Applicant respectfully disagrees.

The Examiner appears to inexplicably equate the terms "spatial compression" with "noise." The term spatial compression refers to compression of image data in a spatial domain, as taught by Hajjahmad (col. 2, lines 7-11). Whereas Accad refers to "discarding any spatial compression," (Accad, col. 6, lines 47-49) this appears to be made with respect to bit-rate reduction that excludes "techniques that involve spatial processing" (Accad, col. 3, lines 60-64). The term "spatial compression" is not used by Accad as being some type of noise that is discarded, as seemingly alleged by the Examiner, but rather as a type or format of compression that may be discarded during a bit-rate reduction technique.

Whereas the Examiner has acknowledged that Hajjahmad fails to disclose *wherein decreasing the full color level causes the image noise to be substantially removed from the scanned image,* as recited by claim 1 (page 3, final paragraph of the Final Office Action), the Examiner instead alleges that Hajjahmad discloses *wherein the full color level of the color element is restored without reintroducing the image noise into the scanned image,* as recite by claim 1 (page 3 of the Final Office Action). Based on the Examiner's acknowledgement of

Hajjahmad and the Examiner's interpretation of noise in view of Accad, it is less than clear what the Examiner is referring to as "image noise" in Hajjahmad.

Rather, the Examiner noted that "since the processed pixels will exhibit full color resolution. Thus the color element is restored without reintroduced the image noise into the scanned image" (page 3 of the Final Office Action). Applicant respectfully submits that the restoration of the full color resolution of the processed pixels, as alleged by the Examiner, fails to provide any correlation to the reintroduction of image noise. Rather, the alleged relationship between color restoration and image noise appears to more or less be an attempt to characterize Applicant's own claim features, rather than providing a reference to Hajjahmad which may be used to support the present grounds of rejection.

Furthermore, Applicant respectfully submits that the Examiner has failed to provide a sufficient allegation as to which, if any, of the references discloses *composing a pattern comprising the number of bits reduced from the full color level of the color element*, as recited by claim 1. The Examiner's rejection of claim 1 is silent as to this element. The Examiner has alleged that Hajjahmad discloses "composing a pattern... comprising the color element" (pages 2-3, of the Final Office Action). The Examiner has also alleged that Accad discloses "decreasing the full color level of the color element by reducing a number of bits of the full color level of the color element to form a reduced color level image" (page 4 of the Final Office Action). Even assuming, arguendo, that the Examiner is correct in these allegations, the Examiner has not provided sufficient support for the allegation that the combination discloses *composing a pattern comprising the number of bits reduced from the full color level* of the color element, as recited by claim 1. Applicant respectfully submits that the rejection of claim 1 is therefore improper, at least on the basis that the Examiner has failed to identify with particularity how, or if, the combination of references discloses all the recited elements.

Although of different scope than claim 1, independent claims 6, 8, and 18 recite certain elements similar to those discussed above in claim 1, such that the comments directed to claim 1 also apply to claims 6, 8, and 18. As claims 2-4, 6, 7, 9-13, and 19-30 depend directly or indirectly from independent claims 1, 6, 8, and 18, the comments and revisions directed above to claims 1, 6, 8, or 18 apply equally to claims 2-4, 6, 7, 9-13, and 19-30, respectively. In addition, claims 2-4, 6, 7, 9-13, and 19-30 recite further subject matter. Accordingly, reconsideration and withdrawal of the rejection of claims 1-4, 6-13, and 18-30 is respectfully requested.

Any statements made by the Examiner that are not addressed by the Applicant do not necessarily constitute agreement by the Applicant. In some cases, the Applicant may have amended or argued the independent claims thereby obviating grounds for rejection of the dependent claims.

CONCLUSION

For the foregoing reasons, the Applicant respectfully requests reconsideration and allowance of the present application. The Examiner is encouraged to telephone the undersigned at (503) 546-1812 if it appears that an interview would be helpful in advancing the case.

Customer No. 73552

Respectfully submitted,

STOLOWITZ FORD COWGER LLP

Bryan D. Kirkpatrick
Reg. No. 53,135

STOLOWITZ FORD COWGER LLP
621 SW Morrison Street, Suite 600
Portland, OR 97205
Telephone: 503-224-2170
Fax: 503-224-2084
Email: docket@stofoco.com